## JOURNAL. MINING

#### MEETINGS.

East Pool, 122, 409, 720, 1018; Eherbardt and Aurora, 558; Economic Life Assurance, 312; English Australian Gold, 57, 152; English and Australian Copper, 194, 823; East Chiverton, 560, 1011; East Craven Moor, 871; Emma, 1302

Fall Creek Lakes Water Company, 452, 479; Fortuna, 376, 1018, 1060; Frontino and Bolivia, 22; Frongoch, 80, 1036; Fuller's Reef, 105, 170, 450

Gawton Copper, 81, 560, 745; General Mining Association, 450, 1246; Geological Society of London, 13, 55, 108, 160, 176, 222, 302, 331, 406, 459, 534, 691, 1140, 1197, 1253, 1273; Glasgow Caradon, 81, 145; Gorsedd, 281, 322; Great Holway, 128, 839, 1302; Great Western Colliery, 200; Great Laxey, 375, 995, 1036; Great Snaefell, 1206; Griffin Silver-Lead, 83; Green Hurth, 384

Halkyn District Mines Drainage, 194; Herodsfoot, 451, 813, 1133; Hultafall, 23,56; Hornachos Silver Lead, 121; Hingston Down, 217, 560, 1189; Huntington, 1312

Ibstock Colliery Company, 913; Institution of Mechanical Engineers, 64, 80, 407, 643, 821, 1112; Institution of Civil Engineers, 80, 539; Iron and Steel Institute, 503; Isabelle Gold and Silver, 200

Javali Company, 312, 384, 1012

Lead Era, 152; Leadhills, 596, 1132; Lovell (The), 23, 788; Littledean Woodside Coal, 33; Lisburne Syndicate, 33; Linares, 376, 1018, 1060; Last Chance, 243; Llanrwst, 323; London and California, 402, 1035; Lusitanian, 568; Levant, 1162; Ladywell, 1274

Mining Institute of Cornwall, 13, 1119; Mining

1143
Victoria (London), 81, 104, 621; Van Railway, 152, 200, 745; Van Mining Company, 281, 321; Vancouver, 560, 1218; Virneberg, 1301
West Godolphin, 57, 426; West Chiverton, 104, 560; 1012; West Basset, 451, 745, 1045; West Wheal Peevor, 812; West Holway, 913; West Pateley Bridge, 988; West Prussian, 1083; West Seton, 1133; West Wye Valley, 1246; Wheal Grenville, 57, 280, 596, 988, 1312; Wheal Uny, 81, 517, 923; Wheal Basset, 145, 846; Wheal Crebor, 224, 668, 1132; Wheal Owles, 224, 597; Wheal Kitty, 224; Wheal Peevor, 271, 685, 1084; Wheal Jane, 559, 4019; Wye Valley, 1245 1019 | Wye Valley, 1245

Yorke Peninsula, 1108

Aberdaunant, 823; Alamillos, 376, 1018, 1060; Antioquia (Frontino), 22, 33, 795, 895; Aruba Island Gold, 517, 1162, 1313; Almada and Tirito, 711; Australian, 787; Avonside Engine, 1036
Bedford United, 560, 895, 1218; Berehaven, 846; Bwlch United, 23; Bodidris, 121; Blue Hills, 218, 621, 1050; British Iron Trade Association, 751; Birdseye Creek, 846, 871; Buena Ventura, 1302
Canborne Literary Institution, 55; Cardiff and Swansea Smokeless Steam Coal, 721, 744; Carn Brea, 243, 597, 1018; Colonial Bank, 21, 668; Colorado, 711, 720; Cesena Sulphur, 787; Clogan, 105; Clementina, 375; Combmartin, 280; Cotton Lead, 1245
Denbighshire Consolidated, 121; Derwent, 1018, 1137; Dolcoath, 170, 480, 788, 1083; Drakewalls, 460; Don Pedro North del Rey, 558, 597, 823; D'Eresby, 788, 975; Devon Great Consols, 517, 559, 597, 1189, 1217
East Pool, 122, 409, 720, 1018; Eherbardt and Aurora, 558; Economic Life Assurance, 312; English and Sustralian Coloper, 194, 823; East Chiverton, 560, 1011; East Crayen Moor, 871, Emers, 1209

1273 ardiganshire mines, 48, 73, 144, 169, 193, 217, 241; A. Francis, 289, 811, 940, 1107, 1160; 296, 297; J. G. Green, 349; 374, 450, 1021

— Craven Moor, G. Sharp, 1098
— Crebor, 1107, 1159
Eberhardt and Aurora Mining Company, J. Pearless, 296; 8
Electric lighting in coal mines, A. Bagot, 97; 505, 506
— signalling in mines, 295, 532
— light, O. Steene, 347
— motive power, 1057
— writing telegraphs, 1129
Electricity, shot firing by, J. Barkell, 371
Elephant ore stamps, 20
Emma Silver Mining Company, A. W. MacDougall, 1177
England and America, E. Lever, 1262
Eric Railway preference shares, 215, 635
Eureka, Nevada, our correspondence, J. D. Power, 95
Exhausted mines, R. Symons, 193
Explosions in coal mines, T. Hawkesley, 97; 240
Explosive for mines, a new, 505
Explosives, regulating, 862
— trial of—powder, J. W. Wilkinson, 1298

Fire-damp in mines, detection of, 985
Flagstaff-Mining Company of Utah, A. Kerly, 191; E. Pearson, 224, 1130, 1143; A. A. de Metz, G. W. Bacon, 373, 692, 1058, 1062, 1106, 1130, 1159, 1185; 417, 613, 633, 1242, 1270, Foreign mines, some, 98
Forest of Wyre coal field—important discovery, W. Molyneux, 1157
Free trade, the ruin of British manufacturers and starving of workmen by one-sided, 95, 241
Frontino and Bolivia Gold Company, 144
Fruel, on consumption of, at collieries, 71
Furnaces for generating steam, 119
— smoke, washing of, 985 [Oo., 1158; J. Barkell, 1186
Fuse and igniter, the instantaneous, Bickford, Smith, and Future promises, R. Tredinnick, 737
Gas company shares v. electric light company shares, C. — power locomotives for transways, 987
— safety-lamps for mines, 119
— noxious, N. Job, 1033 [Thompson, 1033
Gellivare steel, immense advantage in the use of, W. J. Geology of Northumberland, G. Atwood, 47
Glass, ornamenting with metals, 708
Gold mining in California, J. Mosheimer, 19
— in India, E. Harris, 47
— in Venezuela, J. Barwise, 71
— washing on the Mawddach, 144
— mines in the jacotinga formation of Brazil, F. Dietzsch, — mining—New South Wales, R. D. Adams, 268
— mining in Brazil, F. Dietzsch, 347, 448
— mines in the jacotinga formation of Brazil, F. Dietzsch, — mining in Brazil, F. Dietzsch, 347, 448
— mining in Brazil in Dietzsch, 347, 448
— Hullag by endless wier ropes, 168
— France in

Killfreth Mining Company, 193; J. W. Hine, 425
Lady Ashburton Silver Mining Company, 1244, 1271
Lake Superior mining, W. W. Stuart, 373, 424; 810, 886, 938, 1003, 1269
Landed property, oppression of by the illegal conduct of railway companies, W. J. Thompson, 505
Lead mining in Plintshire—Halkyn Mountain, 21
— mining in the Christow district, 48
— mining as an investment, J. L. M. Fraser, 217
— mining in Sark, 270
— ore in the North of England, discovery of, J. Forest, 320
— mining in the North of England, 348, 1011
— trade in America, 433
— trade, the, 632, 837
— and copper (U. S., 447
— in France, 533, 586
— mining prospects in Scotland, 636
— mining prospects in Scotland, 636
— mining in Llanarmon, 1131
Leadhills Mining, &c., 557
Lees Moor Tunnel, Yorkshire, 295
Lighting of mines, the, G. J. Jeb, 97; W. E. Teale, 709
— progress in, C. Steene, 295
Literary amenities, R. Knapp, 39
Literary amenities, R. Knapp, 39
Literary amenities, R. Knapp, 685, 763, 838, 911, 988, Llanidlose district, and mining depression, 987, 1058
Llanrwst Mine, Mr. G. S. Gregory, and Endean and Co., 387
— district, the, 637; R. Knapp, 685, 737; 710, 783, 1130, 1160, 1188
Lodes, circumstances which affect the metallic portions of, Lords' dues or royalties, land damage, &c., 710, 786, 810
Marke Valley Mine, W. J. Morgan, 1059
Medlyn Moor Mine, 21, 73, 533
Metal Market, the, 20
— roofing, enamelled, 532
— separation of, from the ores, 736
— effects of the low price of, 984
— minerals, and mining, R. Tredinnick, 1058
— the production of, 1242
Metallurgy, a new process in, J. Hollway, 240, 320, 584
Mendig mines and miners, 93
Mine shares—difference in price, 425
Mines of great promise, R. Symons, 1010
— of County of Cork, W. Thompson, 581, 555
— wages—the premium system, 680
— wages—in the West, 216
Mining in Canada—Silver Islet, 20
— prospects on the Pacific Coast, 20, 47, 143, 239, 399
— market notes, W. Gabbott, 71, 96, 120
— in the South, W. Salmon, 144
— in Cardiganshire, 144, 169, 193, 217, 259, 296, 297, 321
— enterprise, economic, 16

and banking in Cornwall, 242

and banking in Corawall, 242
improving prospects of—caution, 269
in the Flintshire district, 320
the political importance of, J. Elilott, 348, 356
successful, and successful mines, R. Tredinnick, 449
vicissitudes and despondency, R. Tredinnick, 476
in New South Wales, R. D. Adams, 504
in North Cardiganshire, 506, 613, 788, 1300
interests of Great Britain, R. Tredinnick, 533, 680, 963
prospects on the Pacific Coast, 585, 337, 862
news from Utah, W. Bredemeyer, 585
the science of, R. Knapp, 586, 862, 910, 1000; 810
at Lake Superior, 636
in Llanarmon, 637, 660, 864; J. A. Ede, 922, 964, 1034, the science of, R. Knapp, 537, 660
legislation, 659
home, 660
stagnation in, 685
practical, R. Knapp, 685; shafts, 1271
ground, idle, 710
localities, old, revisited, 737
interest—lords' dues, &c., 762
in Cornwall and Devon, R. Symons, 763
Institute of Cornwall, R. Symons, 338
pursuits, 836
in Cardiganshire—South Cambrian Mine, A. J. W.

pursuits, \$35
in Cardiganshire — South Cambrian Mine, A. J. W.
Stringer, 338; A. Francis, 1082; J. S. Houston, 1262
causes of the depression in, 862
a favourite pursuit, 863
in Colorado—Park County, C. H. Richardson, 938
prespects in the future, R. Tredinnick, 1038
in Nevada, W. Ross, 1130
in Montgomeryshire, and North Wales Correspondent

Southey, Captain, of Wheal Jane and the Chivertons, 374
Spain, the mineral wealth of, J. A. Jones, 168
Stamps, loose bedded, 937
State purchase of railways, 1186
Steam bollers, on, 1309, 1298
— traction on tramways, 233
Steel rails from Cleveland pig, cheap, J. Hosking, 332
— soft, and tin-plates, 119
— monopoly of the world's consumption of, by Swedish
Lapland, W. J. Thompson, 837, 862, 886, 937, 986, 1081,
— v. iron rails, H. Worseldine, 1105
— [1106
St. Gothard Tunnel, the, 837
— [332, 613, 810
Strikes—Devon Great Consols, 21; R. Symons, 48, 736; 189,
Sulphide ores, reducing without fuel, 216; A. H. Allen, 240;
28, 295; G. Gatheral, H. M. Howe, 371; J. Hollway,
399, 544; H. B. Condy, 400; W. T. Shute, 532
— of zinc, manufacture of, 1107
Sulphides, treatment of copper, 659, 683
— utilisation of, P. Blanchard, 635
Surface condensers, W. Nance, 192, 216
Tankerville Mining Company, 687
Tasmanian tin fields, the, J. Pryor, 167
Telegraph Mines of Utah, the old, W. Bredemeyer, 423
Tharsis Sulphur and Copper Company, 191, 320, 348, 373, 424,
448, 475, 522, 555, 613, 636

"Then and now," W. B. Cobb, 1310
Tiles, metallic, improved, 1129
Tin ore, Australian and Tasmanian, D. Stevens, 191
— home and foreign production of, 586
— ores, treatment of, R. Southey, 837, 963; 910, 930, 963,
1010, 1058; W. Nance, 683, 985, 1033, 1105; C. Thomas,
986, 1033; G. Green, 1010, 1081
— stons from Cornish mines, 909, 939, 963
— mining la Australia, 909

SUPPLEMENT, JAN. 31, 1880.] Tin, its future, W. Waddington, 1310

— and its history, Dr. Reyer, 1299
— in Roche, discovery of, R. Symons, D. Cock, 1300

— thank—a new explosive, 78;

Trade, depression in, &c., 583, 559
— indications of a revival in, 736; R. Tredinnick, 862
United Van Consols and Glyn Company, 1218
Utah, mining notes from, W. Bredemeyer, 96; 970
Virgin ground, R. Symons, 193
Water-power for mining purposes, G. Rickard, 1157, 1186,
Watson Brothers' Mining Circular, 72
Watt Cornish pumping engine, the, W. Nance, 267
Wealth of the world, agriculture, manufacture, and mining,
R. Tredinnick, 710
Weights and measures—the ton of 21 cwts., 885
Welsh granite paving quarries, 21, 72; E. Spargo, 97, 144,
268, 321; 241, 296, 349, 374
— Granite Company, G. Farren, 268
Wendron district—Medlyn Moor, 737
West Wheal Peevor, 73; A. Francis, 297
— Basset, R. Symons, 193; 217, 863
— Grenville, P. Provis, 305; 349
— Crebor, T. E. W. Thomas, 711; A. Thomas, 940; 987;
and the "bears," 1034, 1058, 1063, 1160
— Prussia, 786
— Eliza, R. Tredinnick, 810
— Agar—boring machinery, H. Teague, 1158; W. Wad-Winding engine for collieries, 347
Windmill power in mining, T. F. Evans, 532
— for mining purposes, 684
Wind power engines, 762, 1309
Wy Valley Mining Company, 1159
Wynand (India) gold fields, 296; E. Harris, 347, 424; 373, 448
Zine pigments, manufacture of, 961

MISCÉLLANEOUS. MISCELLANEOUS. Abercarne Colliery explosion, the, 182
Admiralty experiments on coal and patent fuel, 55
Agricultural machinery, 307
Air and gas engines—air compressors, 273, 534, 659, 1074
Alpine Silver Mining Company, 483
Albert medals for heroism at Abercarne, 852
Albert medals for heroism at Abercarne, 852
Anterich into trade, the, 110, 1072
— enterprise, 110
— grave limic on the French market, 384
— coal trade statistics, 433
— lead mines and British capital, 460
— builton production, 1317
Antericale coal trade of America, 31
Animals of the coal measures, Prof. Miall, 279
Anucapit table lamp, 1074
Anglo-American food supply, 792
Anglo-French viaduce, the, 601
Anterical coal trade of America, 31
Animals of the coal measures, Prof. Miall, 279
Anglo-French viaduce, the, 602
Anglo-French viaduce, the, 603
Australia and the iron trade, 338
Austrian view of British metallurgy, Herr Hupfield, 976
Automatic coupling on ralivays, 64
— stree—duction unitary, 64
— stree—duction unitary, 64
— stree—duction unitary, 64
— converters, 5. Thomas, 225; 567
Beasemen Works, the, 500
Blasting machine, Marsh's patent, 361
— by means of compressed air, W. E. Garforth, 643
— in mines, simultaneous, 828
— powder, compressed, Mr. Wilkinson, 833
Blast-furnaces, increase Hydraulic Gold Mines, 451

Brake apparatus for collicity winding engines. T. Burns, 1250
Brakes, hydraulic continuous automatic, E. B. Barker, 493
British Dynamite Company v. Krebs and others, 353
Brat-furnaces, increase Hydraulic Gold Mines, 451
Brakes, hydraulic continuous automatic, E. B. Barker, 649
Brakes, phydraulic continuous automatic, E. B. Barker, 893
Brat-furnaces, increase Hydraulic Gold Mines, 451
Brakes, phydraulic continuous automatic, B. B. Barker, 493
Brake apparatus for collicity winding engines. T. Burns, 1250
Brakes, phydraulic continuous automatic, B. B. Barker, 893
Bratilian gold tax, the—St. John del Rey Mining Company, 876
Brakes, phydraulic continuous automatic, B. Barker, 493
Bratilian gold tax, the—St. John del Rey Mining Company, 876
Bratilian gold tax, — rules, infringement of, 627
— explosions, W. Young, 719
— insurance and compensation, R. N. Boyd, 922
— accidents, the prevention of, A. Lupton, 1041
— working in Belgium, 1085
— managers, liability of 1317
Colehester, ancient, J. Y. Watson, 694
Colorado, the far West in, 888
Commerce, the position and prospects of, 87
Commercial depression—its cause and remedy, 160
— Organic Analysis, A. H. Allen, 713
Company, an unfortunate, 1232
Compressed air for blasting in mines, W. E. Garforth, 199, 393
Comstock mines, the depth of, 406, 901
Copper king, a, 73
— sale of Australian, 120
— pyrites, the Bessemer process for, 151
— mining on Lake Superior, 231
— and lead, foreign, 286
— mining in Cornwall and Devonshire, the antiquity of, trade, the, 310, 674
— trade, the, 310, 674
— trade, the American, J. S. Moore, 1149
Cornwall Mining Institute, 1089
— Great Consols, 1121
Cumberland coal field, valuable discovery in the, 110
Dade coal mines, methods of working the, 677
Dangerous places in mines, neglecting to fence off, 1316
Detonator explosion, the, Major A. Ford, 814
Deep mine pumping without pump rods, Mr. Angeley, 9
Devon Great Consols, 304, 333, 321

D'Eresby Mountain group of mines, 133; lead district, 298

Diamonds, manufacture of, 1283
Diams Mine disaster, the, 182
Dictionary of Chemistry, H. Watts, 184
Diamonds in Ohina, M. Fauvel, 122
Diamond Fuel Company, 146
Dividend mines of 1878, 175
Don Pedro North dt. Bey, 133
Drill holes for blasting, economic, E. Jones, 693
Dynamite patents, the, 207
— explosion at Halkyn Deep Level, 288
— experiments with forzen, 288
— experiments with forzen, 288
— scientific experiments with, 693
Eastern Extension Telegraph Company, 596
— Crebor Mine, plan and section of (cliustrated), 1091, 1117
Education, technical and professional, 751
Electric light, the, J. L. King, 3; 30; Farmer-Wallace, 63; C. Dubos, 69; J. W. de castro, 222; as a table lamp, 298; O. W. Harrison, 355; 281, 547, 1017, 1317
Electrical ingit, the, J. L. King, 4; 30; Farmer-Wallace, 63; C. Dubos, 69; J. W. de castro, 222; as a table lamp, 298; O. W. Harrison, 355; 281, 547, 1017, 1317
Electrical ingit, the description of the company of the Graphite in New Zealand, 110
Great Holway Mining Company, 133

— Laxey Mining Company, 271

— Dyliffe, 413
Gunpowder explosion, Major V. D. Majendie, 331, 438
Gwernymynydd (Limited)—mining in Flintshire, 157
Halkyn drainage scheme, and the Flintshire mines, 391
Harbours, dooks, and canals, 3
Heaves or faults, A. T. Davies, 893
High Court of Justice—Chancery Division, 112
Hinges, joints, and springs, 150
Hoisting engines for the Comstock, 1025
Hollway process of smelting, the, 570
"Hurricane Blower," a patent, H. Wilson, 1225
Hydraulic geld mines of California, 1281
Hygienic conditions of coal mines, Dr. Fabre, 58
Injuries to workmen, compensation for, Mr. Macdonald, 1024
Institution of Civil Engineers, premiums awarded by, 691
International Exhibition in Mexico, 547
Investments, sound, W. Abbott, 1017, 1122, 1234
Iron making, early, in Pennsylvania, J. M. Swank, 32
— pig, the exports of, 62
— foreign duties on English, 110
— trade, the American, 110, 593, 1024, 1177
— discoveries in Russia, 150, 466
— coating and protecting, 185
— and steel, annealing of, 185
— trade, improving prospects of the, 230, 258, 876
— in New Zealand, 289
— manufacture, economy in, J. Rigby, 339
— industries of Scotland, R. Meade, 431, 586
— ores, the value of, 466
— and steel chibits at the Paris Exhibition, 573
— and steel for constructive purposes, 595
— smelting, economy in Scotch, 674
— in Australasis, our, 750
— undied, ingot, and mild steel, the properties of, \$28
— gas purification of, H. Haupt, 649
— and steel trades in 1878, 650
— smelting, economy in Scotch, 674
— in Australasis, our, 750
— puddled, ingot, and mild steel, the properties of, \$28
— in the United States, 900, 1316
— and Steel Institute, 900, 993
— and hardware exports, 901
— locomotives, and lead in America, 977
— the American demand for our, 1000, 1120
— and coal industries of North Wales, 1024
— and iron of Northamptodshire, 928
Ist — saving machinery, 574

Laxey United Mines Company, formation of, 437

Lectures on practical mining in Germany, 2, and following numbers

Lead trade, the American, 134, 387, 853, 901

— market—lead mines, 208

— and lead mines, 228

— mines—lead shares, 228

— mining in Derbyshire, 258, 546, 770, 300

— mining in Shappshire, 310

— mining in France, 434, 508

— mining in France, 434, 508

— mining in France, 434, 508

— mining in Ireland, 1193

— ore, production of, 1120

Letterpress printing inventions, 146

Lincolnshire ironstone and iron, 38, 952

Lithofracture, Krebs Brothers, 108; 493

Lighting of fiery mines, W. Morgans, 279, 302

Lime and stone quarrying in Flintshire, 298

Llanbadarn Fawr Lead Mine, W. Eddy, 997

Locomotives for tramways, fireless, 242, 1112

— the largest in the world, 381

— engineer, the model, 845

Macadam, modern machinery for preparing, C. E. Hall, 361

Machinery, English and foreign, 944

— exhibition of at the Yorkshire Agricultural Show, 800, Mammoth Copperopolis Company of Utah, 801

Manganess bronze, P. M. Parsons, 604

Manure manufacture, artificial, 846

Marble mountain of Cape Breton, 355

Market echoes and mining matters, J. H. Crofts, 128, 152, Materials, the strength of, W. Kent, 378

Matthematical drawing, 1134

Metal trade, annual review, 2, 64

— trade in America, 310

— casting of, 465

— the precious in Canada, 964

Metallurgy of quicksilver at Almaden, Mr. Kuss, 49

— decay of South Wales, 546

— new Processes in 788, 269 - casting of, 485.

- casting of, 485.

- the precious in Canada, 984

Metallurgy of quicksilver at Almadan, Mr. Kuss, 49

- decay of South Wales, 546

- new processes in, 788, 869

Metalliferous mines, 778

- Mines Regulation Act, offences against the, 799

- minerals and mining, D. C. Davies, 1140

Metallio ore dressing, J. T. Dawes, 1291

Mineral wealth of South Africa, T. C. Kitto, 250

- resources of Newfoundland, 330

- oil soap, new, 485

- statistic of the United Kingdom, 945

oil soap, new, 455
 statistics of the United Kingdom, 945

Mineral traffic by railway, 628

— resources of the Dutch Indies, C. J. Van Schelle, 645;

Mineralogy of Sardinia, 622

Mineralogy of Sardinia, 622

Mineralogy of Sardinia, 622

Mineralogy of Sardinia, 622

— Explosion Commission, 182, 750

— pits and hauling machinery, J. Bernays, 223

— the shaining of, 628

— the shaining of, 628

— the shaining of, 628

— wentilation and squitary condition of, 750

— respectively of the state Surface condensers, Dr. Le Neve Foster, 152 Surveying in mines and levelling, 522, 1048 — instrument, a new, 1282 Sutro Tunnel, the, 160 Sutro Tunnel, the, 160
Sydney International Exhibition, 1196, 1224, 1252, 1325
Talley Mine, the, 1131
Tammalnan tin, 390; gold mining in, 390
Technical education, secondary, 355; in Nova Scotia, 355; in engineering, mining, &c., 602; 844; in Germany, 814; in Yorkshire, 952; in Canada, 1148 engineering, mining, &c., 602; 844; in Germany, 814; in Yorkshire, 952; in Canada, 1148
Telephane, microphone, and phonograph, 416; in mines, 1233
Terrible Mine, Colorado, 589
Tharisi Copper and Sulphur Company, 288, 386,491, 599
Thermodynamics—Van Rostrand's Science Series, 1141
Tin in Australia, T. Woods, 225, 1149
— dressing, revolution in, 669
— mining in St. Austell, 1222
Timbering in mines, preservation of, 489, 1120
Tramways Company of France, 205
— mechanical power on, 414
Transval, mineral wealth of the, 206
Trade, the revival of, 1204
— depression of, 799
— Union Congress, the, 976
Trinity College, London—encouragement of science studies,
Tungsten industry, the, T. Williams, 127
Turbine wheels, Prof. Trowbridge, 673
Turning and mechanical manipulation, J., J. Holtapffel, 946
Underground haulage in mines, 390 OBITUARY.—T. Sopwith, 59; Capt. Hancock, 59; Capt. W. Roberts, 180; A. Allen, 180; B. Woodcroft, 180; J. Garland, 54; P. Le Neve Footer, 205; W. Michell, 243; C. B. Daver, 241; W. Vivian, 415; Dr. Murchison, 415; J. Fraser, 547, Capt. T. Roberts, 1021; Prof. H. How, 103; P. Stainsby, Capt. Williams, 1169; T. E, W. Thomas, 1199

United States of Colombia, the mineral resources of, 201

— States, affairs in the, 602, 923

— States, and the iron trade, 1024
University af Adelaide, 719
Van Consols and Glyn Lead and Barvtes Mining Company, Victoria, the industrial resources of, H. H. Hayter, 79; 901

— geological survey of, 79

— the mineral resources of, 1000

— University of, 1041
Wages question—Devon Great Consols, 304, 383
Warrington Ironworks, the, 971
Washing furnace smoke, 900
[Metropolitan, 207
Water supply of Aix-la-Chapelle, excavations for, 104; the
— motor hauling and pumping engine, Bailey's, 245
— in the puddling furnace, W. Yeomans, 1177
West Pateley Lead Mines, 813
— Seton, and its prospects, 1019
— Chiverton and Wheal Jane management, 339
— of Scotland Mining Institute, 691
Weights and Measures Act, 1878—won and coal, 10
Weish Mine Speculation, Ashley r. Taylor, 494
Western States of America, development of the railway, &c.,
Wheal Peevor, 258, 490
Wild Duck, or Sportsman's Arms, 160, 273, 587, 713, 888, 914,
Winding-up companies—important decision, 1197
Yorkshire College—coal mining department, 792
— College of Science—Mining Department, 1042 PATENTS.

Air from water pipes, removing, Mr. Trubenbach, 305
— compressor, direct acting, Mr. Schram, 377
Alkaline and earthy sulphates, reducing, E. Bong, 1191
Amalgamator, a new, J. B. Reynolds, 324; C. Peck, 468
Apparatus, safety, for pit cages, 92!
Asphalte, improved manufacture, V. L. Dagwzan, 468
Atmospheric air, heating of, S. Hallam, 361
Bessemer steel from phosphoretic pig-Iron, S. G. Thomas, 1147
Boiler explosions, preventing, Von Rolif and Kramer, 406
Bricks and furnaces linings, refractory, S. G. Thomas, 984
Candles, electric, S. Cohne, 653
Chains and cables, weldless, W. Deakin, 969
Chromograph, the, O. Lelm, 840
Coal, the transport of, T. Snowdon, 153
— apparatus for screening, W. Spedding, 223
— shipping machinery, G. Smith, 339
— and minerals, dressing of, H. Hochstrate, 392; E. Edpreventing the breakage of, Potter and Hair, 574
— improvements in cleaning small, Mr. Schmitt (illustrated), 589
— agglomerating small, G. J. P. Couffinhal, 693
— covves, raising of, C. Jeanson, 737
Colliery cages, loading and unloading, Mr. Fisher, 9
Colouring matter, new, 621
Conper pyrites, economic treatment of, H. Doetsch, 225
— relining of, Wilkes and Johnson, 328
Edison light, the, 44!
Electric currents, generating, Sellon and Edmunds, 1290
Electricity and boring machinery, J. G. Cranston, 1113 PATENTS. Colliery carges, localing and molanding, Mr. Fisher, 9
Colouring matter, new, 22
Colouring matter, new, 22
Concrete walls, T. Potter, 48
Copper pyrites, economic treatment of, H. Doctsch, 225
— refining of, Wilkes and Johnson, 326
Edison light, the, 44
Electric currents, generating, Sellon and Edmunds, 1290
Electricity and boring machinery, J. G. Cranston, 1113
Electro-magnetic machine, Gramme and d'Ivernois, 108
— light, W. S. Wilson, 488; F. Gage, 598; H. W. Tyler,
— lighting for domestic purposes, J. W. Cadett, S21; Edison, 674; R. Compton, 970
— Expansion gear for steam-engines, C. de Negri, 441
Field assaying—the "Little Wonder," J. S. Phillips, 273
Files, the sharpening of, D. W. Waton, 984
Files, the simproved regenerative, W. E. Everitt, 205
— blasts, producing, Bennett and Lumsden, 377
— feeding of, J. Braddock, 385
— for heating iron and steel, Campbell and Summerhill,
— smelting and other, J. Noad, 482
— for melling metals, C. Carr, 912
— puddling and mill, J. H. Builsek, 1170
Gresser gegulators for machinery, C. N. Leroy, 161
Hollway's process of oxidation, 691
"Hurricane" portable forge, J. Hardinge, 1303
Hydraulic engines, expansive, P. Mayer, 272
— locomotives, J. E. Purssell, 1224
Gresser regulators for machinery, C. N. Leroy, 161
Hollway's process of oxidation, 691
"Hurricane" portable forge, J. Hardinge, 1303
Hydraulic engines, expansive, P. Mayer, 272
Incrustation, removing from steam boilers, H. Esser, 969
Ingots, manufacture of, G. Simmons, 1233
Front 361; W. Drake, 422; S. G. Thoms, 485; S. R. Bnyth,
— and steel, protecting, Clark and Fawsitt, 1113

— manufacture of, Martin and Cordier, 117

— land steel, montal manufacture of, T. Heskin, 161
Malleable cast-fron, N. Cordier, 285

— manufacture, Martin and Cordier, 117

— punching and shearing, D. Brickner, 482
— electro deposition of, G. Zami, B. J.

— punching and shear Stone breaking machinery, W. Lester, 33; D. Gray, 489
— cutting, Messrs. Colne, 689
Stokers and smoke preventers, mechanical ("ilustrated), H. C. Sulphide and other compounds of zinc, C. F. Clans, 328
Sulphides, utilisation of as fuel, J. Holway, 689
Sulphides, utilisation of as fuel, J. Holway, 689
Sulphide acid, treating waste, Lavender, Richhards, and WilSulphate of alumina, A. A. Croll, 378
Telt-tale for steam guages, E. Marsden, 385
Telegraph cable, indestructible, Berthoud and Borel, 482
Tin-plate, manufacture of, Dr. F. Belluomini, 32; G. Nurse,
378; D. Davis, 712
— separating tin from, B. Siegler, 201
— crystal decoration of, L. Q. Brim, 273
— cleaning of, T. M. Richards, 476
Tramways, the working of travelling, J. J. Halcombe, 3
— the improved, J. Kerr, 1327
Tubes, welded, C. E. Smith, 1190
Valves, improvements in, W. Green, 1178
Water elevator and air compressor, J. Pallen, 272
— to steam-bollers, supplying of, W. Watson, 1170
Wheel, a new patent, W. Arnold, 39
Winding and safety appartus for mines, M. Neuerbarg, 413
Zinc, a ductile, J. Eade, 926

## THE DIVIDEND MINES OF 1879.

TAXABLE DESCRIPTION AND STREET

COMPILED FROM OFFICIAL SOURCES, AND CONTRIBUTED BY Mr. EDWARD ASHMEAD, MINING SECRETARY AND ACCOUNTANT, 62, CORNHILL, LONDON.

# PARTICULARS OF THE BRITISH METALLIFEROUS MINES WORKED BY PUBLIC COMPANIES WHICH HAVE PAID DIVIDENDS IN THE YEAR 1879.

		Year Company		Ore sold in	1879.	Rate of	E	isting	allotte	d Capital.		Total amount	1	Divid	ends	declared,	1879	
Title of Mining Company.  Dolcoath, Cost-book	Situation of Mine.	com- menced.	Description of ore.	Number of tons.	Amount.	dues.	Shares.	Pa	id.	Total		divided in dividends,	Pe	r sha	re.	Tota	al.	
Dolcoath, Cost-book	Camborne, Cornwall	1799 {	Tin Copper Arsenic	1780 4 72	£ s. d. 79,148 11 11 19 2 4 198 4 0	1-20th	4,296		o 8	£ 45,252	s. d.	£ 490,009		s. 0		£ 4,296		
East Pool, Cost-book	Illogan, Cornwall	-{	Tin Tinstone Copper Arsenic	760 2282	31,279 0 10 1,752 11 8 4,483 11 0 2,450 0 0	} -	6,400	0	9 9	3,120	0 (	113,520	1	19	6	12,640	0	0
Great Laxey, Limited*	Laxey Glen, Isle of Man	1863 {	Silver-lead Blende	1250 5600	20,400 0 0 20,662 10 0	1-8th 1-20th	15,000	4	0 0	60,000	0 (	375,000	0	15	0	11,250	0	0
	near Alston, Northumberland. near Aberystwith, Cardigan	1864 1834	Lead	344 924	3,120 2 7 9,935 12 0	1-10th 1-14th	6,400 400		6 0 5 0	1,920 7,500			0 3	3			0	
Mellanear, Copper, Limited	Hayle, Cornwall	1876	Copper Tinstone	6520	20,886 8 5	1-24th	10,000	2	0 0	20,000	0 (	5,000	0	5	0	2,500	0	0
Minera, Limited	near Wrexham, Denbigh	1850	Lead Blende	2584 3067	24,245 6 6 10,663 10 6	1-11th	9,000	5	0 0	45,000	0 (	606,016	0	8	0	3,600	0	0
North Hendre, Lead, Limited	near Mold, Flint	1870	Lead	2077	19,627 7 6	1-15th {	11,829 8,146		0 0	29,572 8,146		35 709	100	10		7,260	14	0
Prince Patrick, Lead, Limited	near Holywell, Flint	1872	Lead	620	6,146 2 6	15s. per ton.	18,000 8,000	1	0 0	18,000	0 0	16.450	0	2	6	2,950	0	0
Roman Gravels, Limited	Shropshire	1870 {	Lead Blende	2293 120	22,308 15 0 475 5 0	} 1-12th	12,000		0 0	90,000	0 (	93,900	1	10	0	6,000	0	0
South Condurrow, Cost-book	Camborne, Cornwall	1865	Tin Copper	777	31,910 10 4 38 0 5	1-24th	6,123	6	5 6	38,421	16 6	38,110	1	15	0	10,715	5	0
South Wheal Frances, Cost-book	Illogan, Cornwall	_ (	Tin	728	28,970 5 7	1-30th	4,500	7 1	2 4	34,275	0 (	42,712	1	17	6	8,437	10	0
Van, Limited	Montgomery	1869 {	Lead Blende	4300 1750	45,252 10 0 4,562 10 0	1-14th	15,000	4	5 0	63,750	0 (	363,000	1	0	0	15,000	0	0
West Wheal Tolgus, Cost-book Wheal Eliza, Cost-book	Illogan, Cornwall near St. Austell, Cornwall	1860 1861	Copper	3044 614	16,275 18 7 25,922 16 8	1-30th 1-21st	512 1,024		0 0	48,896 18,432	0 0		1 6	0 10			0	
Wheal Peevor, Cost-book	Redruth, Cornwall	1872 {	Tin Leavings.	550	21,226 9 8 1,693 0 0	} 1-20th	3,000	7 1	1 0	22,650	0 (	1	1	13				
			distribution of the control of the c		£453,641 4 0					£558,935	9 4	£2,485,950				£99,002	9	0

<sup>\*</sup> The ore returns of Great Laxey are from August, 1878, to August, 1879.

† As a Limited Company since 1864.

		ende Mines,				_	002		0
,						200	,002	v	
In 1875, l	British Div	idend Mines		in num	ber, paid	l d			
1876	99	99	29	99				,469	(
1877	**	99	31	99			173	,771	(
1878	**	**	27	33			116	,441	(
1879	**		16	**		* * *	99	,002	
		Mining Comp	anie		number	, par			
1877	,	, ,,		19	**			16,5	
1878		, ,,		18	**			87,4	
1879	) ,	, ,,		17	**		4	93,5	68

In 1879 British Mining paid in dividends the lowest amount known within the memory of the present generation, a result in no way attributable to the want of productive mines, of which there are abundance, but to the low prices obtained during the first nine months of the year for ores and metals. No British industry looked so gloomy or so cheerless as that of mining at the opening of 1879, while at the close no enterprise was so buoyant or so hopeful. The turning in the long lane has been reached, and past the turning point, in the new year 1880, is the reward for those whose faith and perseverance have carried them over the bad times of 1879 and the preceding years. The rise in metals came, however, too late to tell on the dividends of 1879; but it is telling already at the opening of 1880. In 1880 we have every reason to expect a large and heavy Dividend List.

	Tons.	Ave	erag	e per	r to	n.	Amou	ınt.	
Black tin	4,449	1	42	0	6		£218,457	15	0
Copper ore	11,857		3	10	G		41,703	0	9
Lead ore									
Silver-lead ore	1,250		16	7	0		20,400	0	0
Blende ore	10,537		3	10	6		36,363	15	6
Sundries	-	***		-		•••••	6,110	16	8
Total							£453,671	4	0

Average p	Bla	ek ti	n.	 Cor	per	ore.	 Le	d or	e.	1	Blen	de or	re.
1875	£51	10	0	 £5	15	0	 £16	10	0		£3	5	0
1876	44	10	0	 5	6	0	 16	2	6		3	13	6
1877	41	15	0	 4	7	0	 13	1	3		3	15	0
1878	35	12	6	 4	7	0	 10	13	0		3	9	. 9
*1879	42	0	6	 3	10	6	 9	18	9		3	9	0

### 1879 ... 42 0 6 ... 3 10 6 ... 9 18 9 ... 3 9 \* Sales sold end of year, after rise, brought up the average for tin.

# PARTICULARS OF THE FOREIGN AND COLONIAL MINES WORKED BY BRITISH PUBLIC COMPANIES WHICH HAVE PAID DIVIDENDS IN THE YEAR 1879.

mula at Maria and Commence	filturation of manufacture	Year	For what worked.	Existin	ng allotted Ca	apital.	Total amount divided in	Reserve	Dividends declared in 1879.		
Title of Mining Company.	Situation of property,	regis- tered.	For what worked.	Shares.	Paid.	Total.	dividends.	and sinking funds,	Per share.	Total.	
Australian Mining	County Sturt, South Australia Cape of Good Hope near Linares, Spain United States of Columbia. Sestri Leranti, near Genoa near Linares, Spain Clunes, Victoria, Australia Eureka, Nevada, U.S. Minas Geraes, Brazil New South Wales. Sierra County, California Plumas County, California Minas Geraes, Brazil Tharsis, Andalusia, Spain Nanaimo, Vancouver Island Victoria, Australia Rhenish Prussia	1845 1863 1854 1864 1867 1852 1852 1871 1868 1859 1870 1872 *1830 1866 1862 1860	Various Copper Lead Gold Copper Lead Gold, Silver, and Lead Gold Gold, Silver, and Lead Gold Various Gold Gold Gold Gold Sold Gold Gold Sold Gold Sold Sold Gold Sold Sold Sold Gold	18,315 20,000 25,000 55,000 3,600 15,000 97,500 40,000 {120,000 80,000 122,500 140,625 8tock { 91,896 31,100 13,000 25,000 25,000 14,000+ 5,500± 1,500§	£ s. d. 7 7 6 10 0 0 2 0 0 2 0 0 3 0 0 1 0 0 0 10 0	134,605‡ 140,000	£ 21,520 700,625 184,270 9,625 70,200 252,850 170,625 417,017 17,500 — 213,870 175,781 1,383,525 } 1,891,182 } £22,623 31,763 £5,562,976	£ 20,000 4,190 — 2,522 5,583 1,500 10,000 67,623 120,124 3,796  7,000  £	£ s. d. 0 2 0 2 7 6 0 3 3 0 1 0 2 0 0 0 4 6 0 2 0 1 5 0 0 3 0 0 1 6 0 3 0 0 1 6 0 25 per cent. 1 13 1 1-5 0 1 6 0 2 6 0 0 7 1 0 0 6 0 2 0 0 16 0	1,831 16 47,500 6 4,062 16 2,750 6 7,200 6 3,375 6 6,000 6 18,375 6 42,187 16 63,250 6 1,032 16 1,032 16 1,406 5	9 19 19 19 19 19 19 19 19 19 19 19 19 19

<sup>\*</sup> Registered as a Limited Company in 1858.

Ordinary.

† Preference

& Deferred

### DIVIDEND MINES.

### BRITISH—SHARE QUOTATIONS, 1879.

### DIVIDEND MINES.

### FOREIGN—SHARE QUOTATIONS, 1879.

Name.	Price.	Lo	vest.	High	hest.	Price.	Name.	Price.	Lov	west.	Hig	hest.	Price.
Attained.	Jan. 1.	Price.	When.	Price.	When.	Dec. 31.	2100110.	Jan. 1.	Price.	When.	Price.	When.	Dec. 31.
Dolcoath East Pool Great Laxey Mellanear Minera Roman Gravels South Condurrow South Wheal Frances Van West Wheal Tolgus Wheal Peevor	11 11½ 7 7½ 17 18 38 40	21 23 8 8 8½ 14 15 3 3½ 7 9 6 6¼ 10 10¼ 6¼ 65 14 15 15 17 6 6¼	Feb. 15 Jan. 18 Feb. 22 Aug. 23 April 5 Feb. 15 Feb. 22 July 19 March 1 Aug. 2 Jan. 18	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Nov. 29 Dec. 27 Oct. 18 Nov. 15 Nov. 15 Dec. 6 Oct. 25 Nov. 29 Dec. 27 Jan. 1 Dec. 27	54 56 22½ 23 17½ 18½ 4½ 4½ 10½ 11½ 12 12½ 12½ 13½ 11 12 22½ 24½ 25 24½ 20 22	Cape Copper Fortuna Frontino and Bolivia Linares Port Phillip Richmond Scottish Australian Sierra Buttes ditto Plumas Eureka St. John del Rey Tharsis	29 30 3½ 4 1½ 2½ 3 3½ 4 1½ 1½ 1 1½ 1½ 1 1½ 1½ 1 1½ 1½ 1 1½ 1½ 1 1½ 2½ 28 250 260 21 22	23 25 3½ 4 1½ 2½ 3¼ 3½ 6½ 7½ 1½ 1½ 1½ 1½ 2½ 2½ 250 260 20½ 21½	March 1 Jan. 1 Jun. 1 July 14 March 26 Aug. 15 Jan. 17 Dec. 10 Jan. 16 Jan. 1 Jan. 6	34 36 5½ 6 2½ 2½ 2½ 5½ 6 2½ 2½ 2 10½ 11 214 2 124 2 224 3 270 280 31 32	Dec. 2 Dec. 16 Nov. 21 Dec. 16 Aug. 1 Jan. 1 Nov. 12 Sept. 30 Nov. 12 Feb. 6 Dec. 29	34 36 51 6 24 24 51 6 6 10 10 10 10 10 10 10 10 10 10 10 10 10